

#4

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SEQUENCE LISTING

<10> Robl, James M.  
Goldsby, Richard A.  
Ferguson, Stacy E.  
Kuroiwa, Yoshima  
Tomizuka, Kazuma  
Ishida, Isao

<120> Expression of Xenogenous (Human)  
Immunoglobulins in Cloned, Transgenic Ungulates

<130> 50195/008003

<140> US 09/988,115

<141> 2001-11-16

<150> US 60/311,625

<151> 2001-08-09

<150> US 60/256,458

<151> 2000-12-20

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<150> US 60/166,410

<151> 1999-11-19

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gtgcacggtc tcagcttaac caccttgaag gagtaactca ttaaagagcg tacgaatgca 180  
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ccatcagcaa tgggttcagc actaggatat gcagcacaca ggagtgtggc ttgggggtaa 1440  
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gagaccccc	agccttggcg	agcctgggga	ctcagagcag	agactgtccc	tccagacggg	3000
cccaggcccc	gctgactgcc	gccccaccgg	gcacccctct	aatccccccag	ctagtagtgt	3060
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 gaggacacgg ctgtgtatta ctgtgcgaga ataactgggg atgcttttga tatctggggc 300  
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 Pro Gly Lys Gly Leu Glu Trp Val Ser Tyr Ile Ser Ser Gly Ser  
 35 40 45  
 Thr Ile Tyr Tyr Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg  
 50 55 60  
 Asp Asn Ala Lys Asn Ser Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala  
 65 70 75 80  
 Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Ile Thr Gly Asp Ala Phe  
 85 90 95  
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ctggagtggg tgacagttat atggtatgac ggaagtaatc aatactatat agactccgtg 180  
aagggccgat tcaccatctc cagagacaat tccaagaaca tgttgatatc gcaaataaac 240  
agcctgagag ccgaggatac ggctgtgtat tactgtgcca gagatcgcaa tggcctgaag 300  
tacttcgatc tctggggccg tggcaccctg gtactgtct catcaggag tgcacccg 360  
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35 40 45  
Tyr Asp Gly Ser Asn Gln Tyr Tyr Ile Asp Ser Val Lys Gly Arg Phe  
50 55 60  
Thr Ile Ser Arg Asp Asn Ser Lys Asn Met Leu Tyr Leu Gln Met Asn  
65 70 75 80  
Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg Asp Arg  
85 90 95  
Asn Gly Leu Lys Tyr Phe Asp Leu Trp Gly Arg Gly Thr Leu Val Thr  
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ggaagtaatt atgtatactg gtaccagcag ctcccaggaa cggcccccaa actcctcatc 180  
tataggaata atcagcggcc ctgagggtc cctgaccgat tctctggctc caagtctggc 240  
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gcagcatggg atgacagcct gagtgtctt ttcggcggag ggaccaagct gaccgtccta 360  
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Cys Ser Gly Ser Ser Ser Asn Ile Gly Ser Asn Tyr Val Tyr Trp Tyr  
35 40 45  
Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr Arg Asn Asn  
50 55 60  
Gln Arg Pro Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Lys Ser Gly  
65 70 75 80  
Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Arg Ser Glu Asp Glu Ala  
85 90 95  
Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu Ser Gly Leu Phe Gly  
100 105 110  
Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala Ala Pro Ser  
115 120 125  
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caaggagaca gcctcagaag ctattatgca agctggtagc agcagaagcc aggacaagcc 180  
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gctgactatt actgtaactc ccgggacagc agtggttaacc atgtggtatt cggcggaggg 360  
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Gly Gln Thr Val Arg Ile Thr Cys Gln Gly Asp Ser Leu Arg Ser Tyr  
35 40 45  
Tyr Ala Ser Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Val Leu Val  
50 55 60

Ile	Tyr	Gly	Lys	Asn	Asn	Arg	Pro	Ser	Gly	Ile	Pro	Asp	Arg	Phe	Ser
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Gly	Ser	Ser	Ser	Gly	Asn	Thr	Ala	Ser	Leu	Thr	Ile	Thr	Gly	Ala	Gln
				85					90					95	
Ala	Glu	Asp	Glu	Ala	Asp	Tyr	Tyr	Cys	Asn	Ser	Arg	Asp	Ser	Ser	Gly
			100					105					110		
Asn	His	Val	Val	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Thr	Val	Leu	Gly	Gln
		115					120					125			
Pro	Lys	Ala	Ala	Pro	Ser	Val	Thr	Leu	Phe	Pro	Pro	Ser	Ser	Glu	Glu
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 aacagtgtgc aggctgagga tgttgagtc tattactgtc ttcaaacaac atatgtccca 360  
 aatactttcg gccaaaggaac caaggtagag atcaaaaggc ctgatgctga gccatccgtc 420  
 ttctcttca aaccatctga tgagcagctg aagaccggaa ctgtctctgt cgtgtgcttg 480  
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 ctcagcagca tctgacact gccagctca gagtaccaa gccatgacgc ctatacgtgt 660  
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<400> 68

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35